AF/3762

IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Andrew M. Pelletier et al.	§	
	§	Group Art Unit: 3762
Serial No.: 09/931,668	§	
	§	Examiner: Bockelman, Mark
Filed: August 16, 2001	§	
	§	
For: METHOD AND APPARATUS FOR MONITORING FETAL STATUS DATA	§	Atty. Docket: GEMS:0055-1/YOD 31-PN-6223
	§	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450,Alexandria, VA 22313-1450, on the date below:

August 30, 2004 — Date
Lynda Howell — Lynda Howell

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 1.191 AND 1.192

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on June 23, 2004, and received by the Patent Office on June 28, 2004.

1. REAL PARTY IN INTEREST

The real party in interest is General Electric Company, the Assignee of the above-referenced application by virtue of the Assignment recorded at reel 010386, frame 0339, and recorded on November 5, 1999. General Electric Company, the Assignee of the above-referenced application, as evidenced by the documents mentioned above, will be directly affected by the Board's decision in the pending appeal.

2. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal. General

Electric Company, the Assignee of the above-referenced application, as evidenced by the documents mentioned above, will be directly affected by the Board's decision in the pending appeal.

3. STATUS OF CLAIMS

Claims 16-19, 21-32, and 34-44 are currently under final rejection and, thus, are the subject of this appeal.

4. STATUS OF AMENDMENTS

The Appellants have not submitted any amendments subsequent to the Final Office Action mailed on March 23, 2004.

5. SUMMARY OF THE INVENTION AND OF THE DISCLOSED EMBODIMENTS

The present invention relates generally to the field of systems for remotely monitoring fetal status. *See* Application, page 1, lines 7-8. More particularly, the invention relates to a technique for accessing and viewing data presentations, such as graphical data charts, based upon patient monitoring in a client-server environment through the use of a server and browser, or similar arrangement. *See* Application, page 1, lines 8-11.

A wide variety of equipment and systems have been developed for monitoring the status of medical patients and procedures, particularly of a fetus and mother. *See* Application, page 1, lines 14-16. For instance, in the field of obstetrics, patient condition parameters, such as fetal heartbeat, intensity and duration of contractions, and so forth, are commonly monitored to determine levels of fetal and maternal stress. *See* Application, page 1, lines 22-25. Because highly specialized physicians may attend to a number of patients in various locations and institutions, various systems have been developed to convey the patient condition data to physicians and specialists. *See* Application, page 2, lines 6-14. However, these systems utilize specialized work stations, or at least compatible

work stations running software specifically designed to interface with the monitoring system. *See* Application, page 2, lines 16-23. As such, these systems impose significant constraints due to the specialized nature of the software and protocols used on both the monitoring side and on the physician or access side. *See* Application, page 2, lines 23-27.

Appellants provide a technique for remote fetal monitoring designed to respond to those needs. In the present technique, a client-server environment is utilized to provide patient data. *See* Application, page 3, line 25 – page 4, line 7. The patient may be located in a medical service facility 12 that includes a monitoring circuit 22 to monitor the patient and communication circuitry 28 to provide access to the patient data via a web server. *See* Application, page 5, line 5 – page 6, line 29. The web server may be accessed by a monitoring station 14 that includes a general-purpose browser application 38. *See* Application, page 7, lines 19-32. The monitoring station 14 may receive presentation pages that historical and updated real time data. *See* Application, page 8, lines 12–27. As such, monitored parameter data may be transferred in a real time mode and in a historical mode. *See* Application, page 14, line 20 - page 15, line 11.

6. **ISSUES**

Issue No. 1:

Whether claims 16-19, 21-27 and 36-41 are unpatentable under 35 U.S.C. § 103(a) as being rendered obvious over U.S. Patent No. 5,857,967 to Frid et al. ("the Frid et al. reference") in view of U.S. Patent No. 5,954,663 to Gat ("the Gat reference") and U.S. Patent No. 5,907,681 to Bates et al. ("the Bates et al. reference").

Issue No. 2:

Whether claims 28-32, 34-35 and 42-44 are unpatentable under 35 U.S.C. § 103(a) as being rendered obvious over the Frid et al. reference (alone or in view of the Gat reference) and the Bates et al. reference.

7. GROUPING OF CLAIMS

In regard to Issue No. 1, independent claims 16 and 23 will stand or fall independently of one another. Dependent claims 17-19, 21, 22, 24-27 and 36-41 will stand or fall with their respective independent claims.

In regard to Issue No. 2, independent claim 28 and dependent claims 29-32, 34-35 and 42-44 will stand or fall with independent claim 28.

8. ARGUMENT

Issue No. 1:

The Examiner rejected claims 16-19, 21-27 and 36-41 under 35 U.S.C. § 103(a) as being unpatentable over the Frid et al. reference in view of the Gat reference and the Bates et al. reference. While the Examiner rejected each of the independent claims 16 and 23 under the same proposed combination of prior art, each of these independent claims will be discussed separately below. Accordingly, Appellants respectfully traverse this rejection.

Legal Precedent

The burden of establishing a prima facie case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a prima facie case, the Examiner must not only show that the combination includes all of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the

hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Claim 16

Independent claim 16 recites:

> A method for monitoring a fetal condition, the method comprising the steps of:
> (a) detecting a fetal parameter of interest and generating a fetal condition signal representative thereof;
> (b) storing the fetal condition signal;
> (c) defining a general purpose network presentation including data representative of the fetal condition signal;
> (d) transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode, and wherein the display station includes a general purpose computer and a browser operating to display the network presentation;
> (e) updating the presentation to include updated data representative of the fetal condition; and
> (f) retransmitting the presentation to the general purpose display station only when the presentation is transmitted in real time mode.

In the rejection of independent claim 16, the Examiner asserted that the Frid et al. reference discloses all of the recited features except possibly the device being a fetal ecg system and the transmission in a real time mode or in a historical mode. In an attempt to cure the deficiencies, the Examiner relied upon the Gat and Bates et al. references. However, the Frid et al., Gat and Bates et al. references, alone or in combination, fail to render the claimed subject matter obvious because the references fail to disclose all of the recited features. For example, the references do not disclose or teach "transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode,"

as recited in claim 16. Hence, Appellants contend that the combination of the Frid et al., Gat and Bates et al. references fail to render the claimed subject matter obvious, which is addressed below.

In the Office Action mailed March 23, 2004, the Examiner equated the recited transmission "in a real time mode or in a historical mode" with the concept of whether or not data is updated. Additionally, in the "Response to Arguments" section, the Examiner stated that downloaded data is historical. In further support of the Examiner's argument, in an Advisory Action faxed on August 19, 2004, the Examiner stated that the "playback option" along with the access to archived records in Gat provide the transmission of historical data verses real time data. However, despite the Examiner's assertions, the references fail to disclose "transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in claim 16.

As a preliminary matter, it should be noted that the term "historical mode," as recited, clearly relates to the *transmission* of the presentation. The refresh rate setting of a browser in no way determines what data is *transmitted* by a server, but only determines how often the browser requests updates from the server. That is, the server determines the data provided to the browser. In claim 16, the presentation is transmitted to a display station "upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode."

To provide the transmission of data in a real time mode and in a historical mode, the Examiner relied upon the Bates et al. reference to cure the deficiencies of the Frid et al. Specifically, the Examiner relied upon an auto refresh selector in Bates et al. to disclose a browser transmitting in a real time mode and in a historical mode. Also, as noted above, the Examiner asserted that "historical mode" corresponds to the data not being updated, which is further clarified by the assertion

that downloaded data is historical. However, a generous reading of the Bates et al. reference fails to disclose any mention of a historical mode of transmission by a target site and confirms that the Bates et al. reference simply addresses techniques for automatically selecting web browser refresh rates. Accordingly, the Examiner's position fails for at least two reasons.

First, the use of auto-refresh only addresses the frequency of the updates from a target site, not the data being provided by the site. An auto-refresh setting relates to the number and timeframe that requests are generated from the browser (*not* the target site) to get updated data. That is, the auto refresh setting simply relates to automatically updating data or updating data without user intervention. Accordingly, Appellants respectfully assert that the configuration of a network browser to auto-refresh does not in any way impact the *transmission* of data by the target site. Instead, an auto-refresh setting relates to the frequency and timeframe that requests are generated from the browser (*not* the target site) to get updated data. As such, the auto-refresh on a web browser does not cause a target site to *transmit* in a "historical mode," as recited in claim 16.

Secondly, disabling the auto-refresh on a web browser does not provoke any transmission of any sort from the target site, much less transmission in a historical mode. If the browser is not configured to auto refresh, *no* transmission of data from the target site is provided because the browser does not request another transmission. Further, any downloaded data is present on the local system and is not transmitted from a target site or any other site. Therefore, even if the Bates et al. reference were to disclose what the Examiner alleges, it does not disclose the *transmission* of a presentation in a historical mode, as recited by claim 16. Accordingly, disabling the auto-refresh on a web browser does not cause a target site to transmit in a "historical mode," as recited in claim 16.

Furthermore, in the Advisory Action, the Examiner asserted that the use of a "playback option" in the Gat reference and ability to retrieve archived records along with the Bates et al. reference discloses the "historical mode." However, as noted by the Examiner, the Gat reference discloses a dedicated computer system utilized as a fetal monitoring system. In this system, a CPU 16 is coupled to fetal sensors 12 and a central monitoring station 18. *See* Gat, Fig. 1; col. 7, lines 9-22. The data processed by the CPU 16 is archived into an archiving unit 28 for later retrieval. *See id.* A physician may access the data for "playback" of CTG traces. However, the reference is devoid of any mention of transmission of a presentation "in a real time mode" or "in a historical mode," much less transmission of a "presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in claim 16. Therefore, the Gat reference does not cure the deficiencies of the Frid et al. reference.

Accordingly, because the references fail to disclose *all* of the claimed elements, the references fail to provide support for a *prima facie* case of obviousness. Therefore, independent claim 16 and respective dependent claims are believed to be patentable over Frid et al., Gat and Bates et al., alone or in combination.

Claim 23

Independent claim 23 recites:

> A method for remotely monitoring a fetal condition via a configurable network connection, the method including the steps of:
>
> (a) monitoring a physiological parameter of a fetus and generating fetal parameter data representative thereof;
>
> (b) defining a user viewable interface page including user selectable command devices;
>
> (c) updating the interface page to include the parameter data;
>
> (d) establishing a network link between a server and a client station; and

> (e) transmitting the updated interface page from the server to the client station for display via a general purpose computer and a browser that operates to display the updated interface page, and wherein the updated interface page is transmitted in a real time mode or in a historical mode.

In the rejection of independent claim 23, which is the same as the rejection of independent claim 16, the Examiner asserted that the Frid et al. reference discloses all of the recited features except possibly the device being a fetal ecg system and the transmission in a real time mode or in a historical mode. Again, in an attempt to cure the deficiencies, the Examiner relied upon the Gat and Bates et al. references. However, the Frid et al., Gat and Bates et al. references, alone or in combination fail to render the claimed subject matter obvious. For example, the references do not disclose or teach "transmitting the updated interface page from the server to the client station ... wherein the updated interface page is transmitted in a real time mode or in a historical mode," recited in claim 23. Hence, Appellants contend that the combination of the Frid et al., Gat and Bates et al. references fail to render the claimed subject matter obvious, which is addressed below.

To begin, neither the Frid et al. reference nor the Gat and Bates et al. references disclose or teach "transmitting the updated interface page from the server to the client station ... wherein the updated interface page is transmitted in a real time mode or in a historical mode," as recited in claim 23. Again, the Examiner asserted that the *transmission in a historical mode* is disclosed by the conventional browser in Bates et al. The Examiner's position is further clarified by the assertion that downloaded data is historical, while real time mode is provided by the automatic refresh of a browser. Despite these assertions, Appellants content that Frid et al., Gat and Bates et al., alone or in combination, fail to disclose "transmitting the updated interface page from the server to the client station ... wherein the updated interface page is transmitted in a real time mode or in a historical mode," as recited in independent claim 23.

As previously noted, the auto-refresh of a browser does not disclose or suggest the transmission in a historical mode. That is, the auto-refresh refresh simply relates to the frequency of the updates of data, not whether it is transmitted in a real time mode or in a historical mode. Thus, Appellants again respectfully submit that Frid et al., Gat and Bates et al., alone or in combination, fail to disclose "transmitting the updated interface page from the server to the client station ... wherein the updated interface page is transmitted in a real time mode or in a historical mode," as recited in independent claim 23.

Accordingly, because the references fail to disclose *all* of the claimed elements, the references fail to provide support for a *prima facie* case of obviousness. Therefore, independent claim 23 and respective dependent claims are believed to be patentable over Frid et al., Gat and Bates et al., alone or in combination.

Issue No. 2:

The Examiner rejected claims 28-32, 34-35 and 42-44 under 35 U.S.C. § 103(a) as being rendered obvious over the Frid et al. reference (alone or in view of the Gat reference) and the Bates et al. reference. Appellants respectfully traverse this rejection.

Independent claim 28 recites:

> A system for monitoring a fetal condition, the system comprising:
> means for detecting a fetal parameter of interest and for generating a fetal condition signal representative thereof;
> means for storing the fetal condition signal;
> means for defining a general purpose network presentation including data representative of the fetal condition signal;
> means for transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode, and wherein the display station comprises a general purpose computer and a browser that operates to display the network presentation;

means for updating the presentation to include updated data representative of the fetal condition; and

means for retransmitting the presentation to the general purpose display station only when the presentation is transmitted in real time mode.

In the rejection of independent claim 28, the Examiner asserted that the Frid et al. reference discloses all of the recited features except possibly the device being a fetal ecg system and the transmission in a real time mode or in a historical mode. In an attempt to cure the deficiencies, the Examiner relied upon the Gat and Bates et al. reference. However, the Frid et al., Gat and Bates et al. references, alone or in combination fail to render the claimed subject matter obvious because the references fail to disclose all of the recited features. For example, the references do not disclose or teach "means for transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in claim 28. Hence, Appellants contend that the combination of the Frid et al., Gat and Bates et al. references fail to render the claimed subject matter obvious, which is addressed below.

Again, neither the Frid et al. reference nor the Gat or Bates et al. references disclose or teach "means for transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in claim 28. In the rejection, the Examiner asserted that *transmission in a historical mode* is disclosed by the conventional browser in Bates et al. Similarly, the Examiner further stated that downloaded data is historical, while real time mode is provided by automatic refresh of a browser. However, despite these assertions, Appellants content that Frid et al., Gat and Bates et al., alone or in combination, fail to disclose "means for transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command

from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in independent claim 28.

As discussed above, the auto-refresh of a browser does not disclose or suggest the transmission in a historical mode, but relates to the frequency of the update of information. The auto-refresh does not even determine the data to be transmitted, unlike the claimed subject matter that recites transmitting a presentation "upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in claim 28. Thus, Appellants again respectfully submit that Frid et al., Gat and Bates et al., alone or in combination, fail to disclose "means for transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode," as recited in independent claim 28.

Accordingly, because the references fail to disclose *all* of the claimed elements, the references fail to provide support for a *prima facie* case of obviousness. Therefore, independent claim 28 and respective dependent claims are believed to be patentable over Frid et al., Gat and Bates et al., alone or in combination.

CONCLUSION

In view of the above remarks, Appellants respectfully submit that the Examiner has provided no supportable position or evidence that claims 16-19, 21-32 and 34-44 are rendered obvious in view of the prior art references. Accordingly, Appellants respectfully request that the Board find claims 16-19, 21-32 and 34-44 patentable over the prior art of record and reverse all outstanding rejections.

Appeal Brief Fee and General Authorization for Extensions of Time

The Commissioner is authorized to charge the requisite fee of $330.00, and any additional fees which may be required, to Account No. 07-0845, Order No./YOD

(GEMS:0055-1). Further, in accordance with 37 C.F.R. § 1.136, Appellants hereby provide a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefor. Furthermore, Appellants authorize the Commissioner to charge the appropriate fee for any extension of time to Deposit Account No. 54-2401, Order No. 31-PN-6223/YOD (GEMS:0055-1).

Respectfully submitted,

Date: August 30, 2004

Brent R. Knight
Reg. No. 54,226
FLETCHER YODER
P.O. Box 692289
Houston, TX 77269-2289
(281) 970-4545

9. APPENDIX OF CLAIMS ON APPEAL

16. A method for monitoring a fetal condition, the method comprising the steps of:

(a) detecting a fetal parameter of interest and generating a fetal condition signal representative thereof;

(b) storing the fetal condition signal;

(c) defining a general purpose network presentation including data representative of the fetal condition signal;

(d) transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode, and wherein the display station includes a general purpose computer and a browser operating to display the network presentation;

(e) updating the presentation to include updated data representative of the fetal condition; and

(f) retransmitting the presentation to the general purpose display station only when the presentation is transmitted in real time mode.

17. The method of claim 16, wherein step (a) includes real time monitoring of the parameter and step (e) includes real time updating of the network presentation to include data representative of most recently available monitored fetal condition signals.

18. The method of claim 17, wherein step (f) includes real time retransmission of the real time updated network presentation when the presentation is transmitted in real time mode.

19. The method of claim 16, wherein the network presentation is based upon a web page defined in a markup language.

21. The method of claim 16, wherein the network presentation includes historical data accessible by a user at the display station in response to a user command.

22. The method of claim 16, wherein the network presentation includes a graphical representation of the data.

23. A method for remotely monitoring a fetal condition via a configurable network connection, the method including the steps of:

(a) monitoring a physiological parameter of a fetus and generating fetal parameter data representative thereof;

(b) defining a user viewable interface page including user selectable command devices;

(c) updating the interface page to include the parameter data;

(d) establishing a network link between a server and a client station; and

(e) transmitting the updated interface page from the server to the client station for display via a general purpose computer and a browser that operates to display the updated interface page, and wherein the updated interface page is transmitted in a real time mode or in a historical mode.

24. The method of claim 23, wherein steps (a) and (c) include updating the parameter data in real time.

25. The method of claim 23, wherein the user viewable interface page includes a graphical representation of the parameter data.

26. The method of claim 23, wherein the user viewable interface page includes historical parameter data viewable by a user by selection of a command device.

27. The method of claim 23, wherein step (e) includes real time updating of the interface page by retransmission of at least a portion thereof to the client station when the interface page is transmitted in real time mode.

28. A system for monitoring a fetal condition, the system comprising:

means for detecting a fetal parameter of interest and for generating a fetal condition signal representative thereof;

means for storing the fetal condition signal;

means for defining a general purpose network presentation including data representative of the fetal condition signal;

means for transmitting the presentation to a general purpose display station via a configurable network link upon receipt of a command from the display station, wherein the presentation is transmitted in a real time mode or in a historical mode, and wherein the display station comprises a general purpose computer and a browser that operates to display the network presentation;

means for updating the presentation to include updated data representative of the fetal condition; and

means for retransmitting the presentation to the general purpose display station only when the presentation is transmitted in real time mode.

29. The system of claim 28, wherein the means for detecting the fetal parameter detects the parameter in real time.

30. The system of claim 29, wherein the means for defining the general purpose network presentation performs real time updating of the network presentation to include data representative of most recently available monitored fetal condition signals.

31. The system of claim 30, wherein the means for transmitting the presentation provides real time retransmission of the real time updated network presentation when the presentation is transmitted in real time mode.

32. The system of claim 28, wherein the network presentation is based upon a web page defined in a markup language.

34. The system of claim 28, wherein the network presentation includes historical data accessible by a user at the display station in response to a user command.

35. The system of claim 28, wherein the network presentation includes a graphical representation of the data.

36. The method of claim 16, wherein the mode is user selectable at the display station.

37. The method of claim 16, wherein the transmitted data corresponds to an event of significance to the condition being monitored when the presentation is transmitted in historical mode.

38. The method of claim 16, further comprising transmitting data to the display station representative of bed names, time and date, vital signs, membrane status, or patient name.

39. The method of claim 23, wherein the mode is user selectable at the client station.

40. The method of claim 23, wherein the transmitted data corresponds to an event of significance to the condition being monitored when the interface page is transmitted in historical mode.

41. The method of claim 23, further comprising transmitting data to the client station representative of bed names, time and date, vital signs, membrane status, or patient name.

42. The system of claim 28, wherein the mode is user selectable at the display station.

43. The system of claim 28, wherein the transmitted data corresponds to an event of significance to the condition being monitored when the presentation is transmitted in historical mode.

44. The system of claim 28, further comprising transmitting data to the display station representative of bed names, time and date, vital signs, membrane status, or patient name.